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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,824	02/09/2004	Bryan P. Dube	EH-10900(04-101)	9238

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EXAMINER	
WHITE, DWAYNE J	

ART UNIT	PAPER NUMBER
3745	

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SP

Office Action Summary	Application No.	Applicant(s)	
	10/774,824	DUBE ET AL.	
	Examiner	Art Unit	
	Dwayne J. White	3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2/9/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 recites the limitation "said longitudinal axis" in line 3. There is insufficient antecedent basis for this limitation in the claim. Since claim 8 depends from claim 7, claim 8 is also rejected.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-6, 9-13 and 16-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Urban (6,805,530). Urban discloses a turbine blade for use in a gas turbine engine comprising: an airfoil 42 portion having a tip end; a shroud 40 attached to the tip end and having an outer

surface; and a knife edge 24 attached to the outer surface of the shroud. The knife edge has a pair of cutter blades 44 protruding outwardly from the knife edge and is located in a central region of the knife edge (See Figure 3). The cutter blades are also staggered with respect to each other and positioned in a manner to best balance the shroud load over the airfoil portion. The pair of cutter blades protrudes from opposing sides. The knife edge is integrally formed with the shroud and the cutter blades are machined into the knife edge. The turbine blade further comprises a plurality of cooling holes extending through the airfoil portion. It should be noted that the Examiner is viewing claims 16-19 as product by process claims. I.e. since the final product of an airfoil having a knife edge and cutter blades would be the same whether the process as claimed is used to manufacture the product or any process known to one of ordinary skill in the art is used.

> *"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product*
>
> *does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted) (Claim was directed to a novolac color developer. The process of making the developer was allowed. The difference between the inventive process and the prior art was the addition of metal oxide and carboxylic acid as separate ingredients instead of adding the more expensive pre-reacted metal carboxylate. The product-by-process claim was rejected*

because the end product, in both the prior art and the allowed process, ends up containing metal carboxylate. The fact that the metal carboxylate is not directly added, but is instead produced in-situ does not change the end product.).

Claims 1-6, 9-13 and 16-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Beddard et al. (6,913,445). Beddard et al. disclose a turbine blade for use in a gas turbine engine comprising: an airfoil 110 portion having a tip end; a shroud 120 attached to the tip end and having an outer surface; and a knife edge 130 attached to the outer surface of the shroud. The knife edge has a pair of cutter blades 150/160 protruding outwardly from the knife edge and is located in a central region of the knife edge (See Figure 4). The cutter blades are also staggered with respect to each other and positioned in a manner to best balance the shroud load over the airfoil portion. The pair of cutter blades protrudes from opposing sides. The knife edge is integrally formed with the shroud and the cutter blades are machined into the knife edge. The turbine blade further comprises a plurality of cooling holes extending through the airfoil portion. It should be noted that the Examiner is viewing claims 16-19 as product by process claims. I.e. since the final product of an airfoil having a knife edge and cutter blades would be the same whether the process as claimed is used to manufacture the product or any process known to one of ordinary skill in the art is used.

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product

does not depend on its method of production. If the product in the product-by-process

claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted) (Claim was directed to a novolac color developer. The process of making the developer was allowed. The difference between the inventive process and the prior art was the addition of metal oxide and carboxylic acid as separate ingredients instead of adding the more expensive pre-reacted metal carboxylate. The product-by-process claim was rejected because the end product, in both the prior art and the allowed process, ends up containing metal carboxylate. The fact that the metal carboxylate is not directly added, but is instead produced in-situ does not change the end product.).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 7, 8 (as far as they are definite), 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Urban in view of Nishimura (JP 08303204 A). Urban discloses all of the claimed subject matter except for the cutting edge of the first and second cutter blades being at an obtuse angle with respect to the longitudinal axis of the knife edge.

Nishimura teaches a knife edge having a cutter blade wherein the cutter blade has a cutting edge at an obtuse angle to the longitudinal axis of the knife edge. Since both Urban and

Nishimura disclose gas turbine airfoils having shrouds, it would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the cutting edge of Urban, with the teachings of Nishimura, by forming the edge at an obtuse angle for the purpose of improving the cutting ability of the cutting edge (page 4, lines 2-5).

Claims 7, 8 (as far as they are definite), 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beddard et al. in view of Nishimura (JP 08303204 A). Beddard et al. disclose all of the claimed subject matter except for the cutting edge of the first and second cutter blades being at an obtuse angle with respect to the longitudinal axis of the knife edge.

Nishimura teaches a knife edge having a cutter blade wherein the cutter blade has a cutting edge at an obtuse angle to the longitudinal axis of the knife edge. Since both Beddard et al. and Nishimura disclose gas turbine airfoils having shrouds, it would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the cutting edge of Beddard et al., with the teachings of Nishimura, by forming the edge at an obtuse angle for the purpose of improving the cutting ability of the cutting edge (page 4, lines 2-5).

CONCLSUION

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwayne J. White whose telephone number is (571) 272-4825. The examiner can normally be reached on 7:00 am to 4 pm T-F and alternate Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look can be reached on (571) 272-4820. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Art Unit 3745

DJW

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8/8/05